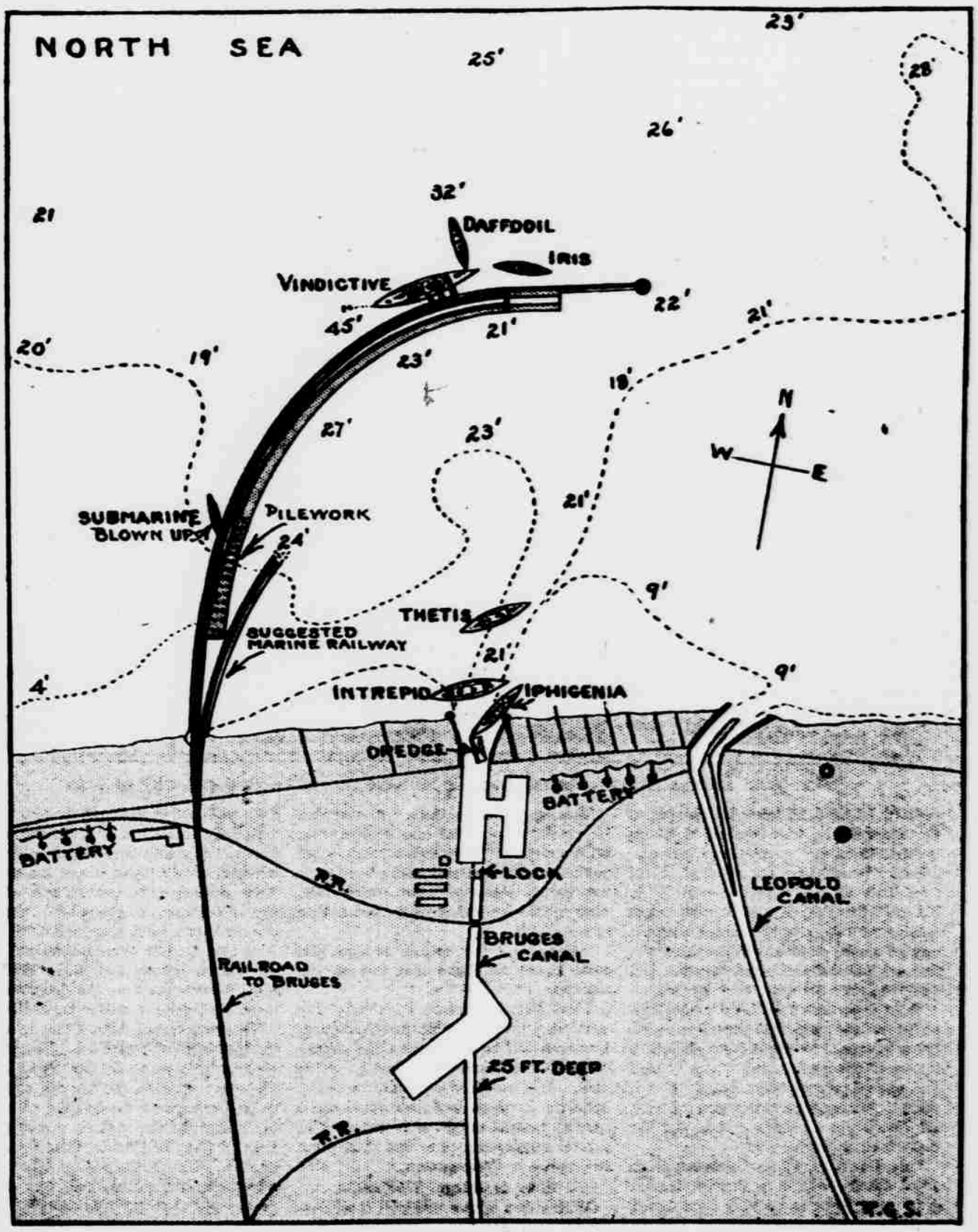

General plan of Zeebrugge Harbor, with depth of water marked in feet and bottom contours indicated by dotted lines.

(Continued from preceding page.)

naval commander of the blockading squadron lying off Charleston and elsewhere on the Carolina coast during the civil war. The United States Government was particularly anxious to bottle up certain of the inlets, together with Charleston, so as to hamper more effectively the movements of wily British blockade runners. The scheme hit upon, after mature deliberation and no end of discussion pro and con in Washington, was the sinking squarely across the fairways of vessels loaded with stone. That was before the use of cement was general, and broken rock was deemed sufficient to hold the sunken craft in place and to add to their formidableness as barriers.

The officer originally detailed to engineer the placing of these several obstructions found his job a fairly staggering one. After writing to the Navy Department that the outlook was anything but encouraging, yet anxious to do his best, he said:

"It would not be wise or manly to risk an almost certain chance of failure. There is an evident soreness about the orders for this duty and I only wish I were free of it as there is but little inclination to give facilities or to feel cordiality toward the agents employed."

Such was the state of affairs toward the end of September, 1861.

Shortly afterward another officer was detailed to take charge of the work, and a while afterward one of his subordinates made this significant report regarding Ocracoke Inlet:

"I saw enough to convince me that blocking up the channel for any length of time is not practicable. . . . It requires but a brief observation and knowledge of these inlets, with their swift and irregular currents rushing to the ocean, to convince the most sceptical that attempt to close them by sunken obstructions is warring against nature in one of her most irresistible forms, as exhibited in this Sound (Pamlico) with its vast drainage of inland waters. It may be that the sinking of a few schooners will obstruct present channels, but no earthly power can stop the rush of these waters to their destination—the ocean. Everywhere the bottom sands are alive and creeping; in a few days or weeks at most the current sweeps beneath the sunken hulks and either engulfs them to a greater depth or quickly and surely washes a channel elsewhere."

One of the pilots with the blockading fleet—a man familiar with the Carolina coast—confirmed this opinion in this fashion:

"I consider any attempt to block it (Ocracoke Inlet) up by sinking vessels would only be of short duration, not lasting thirty days, before there would be as good navigation as ever. As an instance, in 1857, I saw a vessel bilge and sink on an anchor in the Swash Channel, lying directly across it, entirely blocking it up, and in one week a channel was cut out around the stern and the navigation was as good as ever, where before she sunk there were not three feet of water."

And finally, after many days, three stone laden schooners, chained together, bow and stern, were sunk at slack water athwart the channel at Ocracoke Inlet. Later on—to be exact, on December 20, 1861—twenty hulks filled with broken rock were submerged in the channels leading into Charleston harbor. It was not long before new waterways were cut in the sandy bottom by the tidal currents, but these were sufficiently devious and shifting to deter would-be blockade runners venturing to enter or leave the port during the hours of darkness. The subaqueous obstructions alone might not have sufficed as deterrents, but they supplemented the menacing watchfulness of the line of blockading ships lying off the Confederate stronghold.

Now, at Zeebrugge the sandy sea bed is substantially a counterpart in its restlessness of that adjacent to the Carolina coast, and because of the far greater rise and fall of tide along the Belgian shore, the currents are probably swifter. Indeed vessels that founder in the coastal waters of Belgium and Holland are quickly buried by the undermining action of the North Sea's sweeping flood, and if they are not promptly covered by a heavy blanket of sand, deep channels are cut at the extremities of the obstructing wrecks.

What, then, are the probabilities of Zeebrugge's sea gate to the canal being blocked for any protracted period?

If the hulls of the Iphigenia and Intrepid do not completely barricade the canal entrance, there is little justification for the belief that U-boats cannot make their way out into the North Sea and return to their haven with their quondam confidence. Unlike the naval investment of Charleston, hostile craft are kept miles away from the German base by reason of the protecting batteries that have been planted there, and the Kaiser's submarines can actually leave and enter the Belgian port in broad daylight, thanks to the cover of those powerful guns.

And if the canal lock has been destroyed, as we have been given to understand, that in itself does not necessarily prevent Zeebrugge from continuing to be a successful U-boat base.

The railroad still runs unhampered, so far as is known, from Bruges to Zeebrugge, and it is conceivable that submarines can be brought by rail from Bruges to the coast. As an engineering feat it would be fairly simple to build launching ways from the seawall to the deep water of the harbor, close to the sheltering arm of the mole. And it is quite feasible to use these launching ways to pull a submarine out of the water and ashore, if such a procedure be necessary. Some hundreds of yards of wire cable, a few heavy wrecking blocks and a locomotive would probably be able to negotiate the transfer.

This is a method of transporting, launching and landing submarines which has been worked out in some detail by an American specialist in underwater craft, Simon Lake. Mr. Lake revealed his scheme some years ago, and the Germans are probably familiar with it.

Walk in Trench A Desert Epic

By CAPT. LORD DUNSANY.

Lord Dunsany, the playwright, is a Captain in the First Battalion of Royal Inniskilling Fusiliers and was wounded in action in 1916. Consequently he writes of the trenches from personal knowledge.

TO stand at the beginning of a road is always wonderful; for on all roads before they end experience lies; sometimes adventure.

And a trench, even as a road, has its beginnings somewhere. In the heart of a very strange country you find them suddenly. A trench may begin in the ruins of a house, may run up out of a ditch, may be cut into a rise of ground sheltered under a hill, and is built in many ways by many men.

As to who is the best builder of trenches there can be little doubt, and any British soldier would probably admit that for painstaking work and excellence of construction, there are few to rival Von Hindenburg. His Hindenburg line is a model of neatness and comfort, and it would be only a very ungrateful British soldier who would deny it. German dugouts, in particular, have been a great comfort to our men since July, 1916.

You come to the trenches out of strangely wasted lands; you come, perhaps, to a wood in an agony of contortions, black, branchless, sepulchral trees, and then no more trees at all. The country after that is still called Nord or Somme, still has its old name on the map as though it smiled there still, sheltering cities and hamlets and radiant white orchards and gardens, but the country named Somme, or whatever it be, is all gone away, and there stretches for miles instead one of the world's great deserts, a thing to take its place no longer with smiling lands, but with Sahara, Gobi, Kalahari and the Karoo; not to be thought of as Picardy, but more suitably to be named the Desert of Wilhelm.

Through these sad lands one goes to come to the trenches. Overhead floats, until it is chased away, an airplane with little black crosses, that you can scarcely see at his respectful height, peering to see what more harm may be done in the desolation and ruin.

Things Unusual in a Desert.

You see many things there that are unusual in deserts; a good road, a railway, perhaps a motor bus; you see what was obviously once a village, and hear English songs; but none who has not seen it can imagine the country in which the trenches lie unless he bear a desert clearly in his mind, a desert that has moved from its place on the map by some enchantment of wizardry and come down on a smiling country. Would it not be glorious to be a Kaiser and be able to do things like that?

Past all manner of men, past no trees, no hedges, no fields, but only one field from sky line to sky line that has been harrowed by war, one goes with companions that this event in our history has drawn from all parts of the earth. On that road you may hear, all in one walk, where is the best place to get lunch in the city; you may hear how they laid a drag for some Irish pack and what the master said; you may hear a farmer lamenting over the harm that rhinoceroses do to his coffee crop; you may hear Shakespeare quoted and *La Vie Parisienne*.

In the village you see a lot of German orders with their silly notes of exclamation after them, written up on notice boards among the ruins. Ruins and German orders. That turning movement of Von Kluck's near Paris in 1914 was a mistake. Had he not done it we might have had ruins and German orders everywhere. And yet Von Kluck may comfort himself with the thought that it is not by his mistakes that Destiny shapes the world: such a nightmare as a worldwide German domination can have had no place among the scheme of things.

Beyond the village the batteries are thick. A great howitzer near the road lifts its huge muzzle slowly, fires and goes down again, and lifts again and fires. It is as though Polyhemias had lifted his huge shape slowly, leisurely from the hillside, where he was sitting, and hurled the mountain top, and sat down again. If he is firing pretty regularly you are sure to get the blast of one of them as you go by, and it can be a very strong wind indeed.

And so we come in sight of the support trenches, and at the same time perilously near to the limit of space that in these exiguous days the editor is likely to allow to this article.